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via Federal Express

Arthur Anderson & Co.
c/o Mr. James F. Britt
Executive Director
Bell Communications Research
LCC 2E-243
290 West Mount Pleasant Avenue
Livingston, New Jersey 07039

Re: Independent Review of
SCIS/SCM (CC Docket No. 92-91)

Gentlemen:

By letter dated May 14, 1992, the Chief of the Federal Communications Commission's Common Carrier Bureau invited interested parties to identified aspects of Arthur Andersen's ongoing independent review of the Switching Cost Information System ("SCIS")/Switching Cost Module ("SCM") models which could be improved. The Ad Hoc Telecommunications Users Committee participated in the May 13 briefing regarding the anticipated scope and nature of the review Arthur Andersen proposed to undertake, as well as the projected form and content of its final report. The Ad Hoc Committee commissioned Economics and Technology, Inc. to assess Arthur Andersen's approach and to suggest refinements which would enhance the usefulness of the results thereof. Attached hereto is a memorandum prepared by Page Montgomery, Senior Vice President of Economics and Technology, Inc., which proposes a number of modifications to Arthur Andersen's methodology which the Ad Hoc Committee believes would produce superior results.

Sincerely,

Charles C. Hunter
Attorney for the Ad Hoc
Telecommunications Users
Committee

CCH/rs
Enclosure
cc (w/enc.): Donna R. Searcy, Secretary
John Cimko, Jr., Chief, Tariff Division
SCIS Parties of Record

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MEMORANDUM

TO: Charles Hunter
RE: Comments relative to the Arthur Andersen SCIS study
DATE: May 21, 1992

As you requested, I have examined the written material that was presented at the May 13, 1992 meeting concerning Bellcore's SCIS model and the analysis to be undertaken by Arthur Andersen. I reviewed your notes and we have discussed the application of SCIS with respect to ONA basic service elements (BSEs). I wish to make four points with respect to SCIS and its utilization in the ONA tariff context.

First, it is imperative that the Arthur Andersen audit should be sufficient to address *all* issues raised in the ONA tariff petitions by parties such as the Ad Hoc Committee. That is the examinations should produce results with respect to all facets of the tariff development process that may implicate SCIS and the getting started investments, or "investment building blocks" produced by SCIS. In my opinion, it will not be sufficient for Arthur Andersen to study only the most commonly offered BSEs. As documented in the November 1991 ONA tariff petitions, a number of BSEs were offered only by a subset of the RBOCs. Some RBOCs did not offer BSEs that *had* been identified in their ONA plans. To the extent a carrier's decision not to offer a BSE was based upon economic feasibility or market demand estimates based in part upon costs produced by SCIS, SCIS would be relevant to examining why the BSE was not offered. In other words, beyond the cases where SCIS *was* used for a tariffed BSE, presumably some other LECs relied upon possibly questionable SCIS runs in order to determine that the same BSE was not feasible and thus they did not tariff it. The Commission has not, however, required LECs to file SCIS or related data for any BSEs not tariffed; this fact cannot be changed now. Accordingly, it is extremely important that SCIS-related BSE cost data be examined even in those instances where as few as three (3) RBOCs *did propose* to offer it,[1] rather than confining to the analysis to the few BSEs that were offered by most or all RBOCs.

Second, each RBOC should be required to identify with respect to each BSE study item

1. For convenience I will refer to any such BSE that is offered by at least three RBOCs as a "BSE Study Item."

whether the SCIS model was run using the "average" or "incremental" set of cost assumptions. The impact of this assumption is important for several reasons:

(A) I have been involved in several analyses involving state commissions where it appeared that an LEC utilized the "average" version of one SCIS feature (or vertical service) module, while it used the "incremental" version in a different module for a similar service. By similar services I mean services that consume similar central office resources, e.g., line terminations or processor cycles. In some cases, the former "average" assumption was used for a feature associated with a monopoly service, whereas the latter type of SCIS run was performed for features that might be associated with competitive services such as "centrex" offerings.[2] Thus, the sensitivity of the SCIS output data to these types of assumptions must be part of the inquiry. Arthur Andersen's analysis should include the substitution of "average" for "incremental" cost assumptions in SCIS runs to the extent this is feasible. If it is not feasible, Arthur Andersen should identify the reason(s) why, with respect to each BSE study item for each affected RBOC.[3]

(B) The term "incremental" can mean either that the SCIS study assumes the use of wholly new capacity by the vertical feature, or that the feature occupies otherwise spare capacity. The consequences of these different "incremental" capacity assumptions and/or average cost assumptions may be quite significant. The Bellcore presentation sheets used at the May 13 meeting illustrate the uses of "capacity" (see p."823.002"). Arthur Andersen must be able to report what assumptions, sets of conditions or other factors were applied to capacity costs by each RBOC with respect to each BSE study item. That is, the consultant's analysis should specify whether average, short-run incremental (i.e.,

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2. Many RBOCs now have tradenames associated with centrex, like Centron, Plexar or DCOSS.

3. To the extent that the audit does not or cannot identify this effect, the FCC should require each RBOC to file a *list* of each SCIS system basic or feature module that it has submitted as cost support with any state commission in the last three (3) years and state the assumptions, including "average" versus "incremental" that were used. This material would consist of lists, rather than the underlying SCIS cost runs and workpapers, that can be used for comparisons between rate setting techniques used for different RBOC central office features.

using spare) capacity or long-run incremental (i.e., using only added) capacity] was assumed for each study item.

(C) The same sheet from May 13 (p. 823.002) notes that the "fill factor" used to calculate usable capacity may be a time value calculation. Arthur Andersen should test the effects of different time values. Differences in RBOCs' discounting periods should, if possible, be equated to a common time horizon as well as a common discount rate. The Commission's Part 64 cost allocation rule requires that RBOC nonregulated services be assigned joint costs for the highest usage forecasted over a three-year period. The three year period is a relatively short-run horizon, but it is presumptively reasonable since the FCC has examined the issue in the context of joint cost accounting in CC Docket 86-111.[4] The time value fill factor assumptions used by the RBOCs should be rerun for each BSE study item using the three-year value.

Third, the November 26, 1991 petitions concerning the ONA tariffs identify vast differences in rate levels for BSEs whose estimated demand per RBOC is generally proportional to underlying BSA demand for the same carrier. "Call billing number delivery" is one good example. Thus, the analysis must consider the mix of facilities that each RBOC assumed would be used to serve the demand for each BSE. The Arthur Andersen study should identify the number of facility units (e.g. central office equipment) assumed by each RBOC for each BSE study item. The Bellcore portion of the May 13 presentation (p. 823.005) might be interpreted to suggest that any given BSE will have a facility usage value that is "hardwired" in the program (in this case, milliseconds). This is not the case, however, since facility parameters are input into several types of SCIS modules. Therefore Arthur Anderson needs to identify the different input values assumed by each RBOC for each BSE study item. It would be useful for Arthur Andersen to identify the source of any facility usage assumption, as well; i.e., is it based upon actual RBOC data (like three-way calling holding times), forecasts, etc.

Facility usage units will involve traffic factors such as milliseconds of holding time, processor cycles, call CCS (hundred call seconds, average call duration) or BH CCS. They

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4. Indeed, the cost allocation rule in question was devised in order to create more equal conditions between costs incurred by RBOC enhanced services and services offered by competing providers. It makes sense to use the same time period in order to examine and compare calculations for BSEs that are supposed to benefit these same competing providers.

also involve, as the Bellcore presentation notes (p. 823.002), terminations, like various types of trunk terminations (e.g., at end office, at tandem switches, tie-trunk terminations, trunk and line card modules. Every such facility unit should be identified and subjected to sensitivity studies using the RBOC average number of units for a particular BSE versus the number input or assumed by a specific RBOC whose results are being subjected to he sensitivity analysis.

Finally, it is very important that the Arthur Andersen analysis be specified so that any redacted material should be carefully designed to fulfill the purposes of the FCC's non-disclosure order. As I understand it, the purposes of holding some of the SCIS-related confidential are (a) to preserve Bellcore's possible commercial interests in the software code and (b) to prevent the disclosure of data submitted by vendors of central office equipment. Lee Selwyn's memo of March 23, 1992 to you already has described why the redacted information made available to date cannot be used to provide an adequate analysis of the RBOCs' varying uses of SCIS and widely varying cost results. Additionally, that memo noted, and I hereby confirm based upon my personal knowledge, that the access to SCIS afforded by Bellcore in the context of the ONA tariff investigation is far more limited and restrictive than the access permitted in many state regulatory proceedings — where the state regulators have precisely the same objectives with respect to the protection of vendor data and software code as does the FCC.

Based upon my experience, it should be relatively easy to use the SCIS inputs, usage assumptions and relative outputs in order to perform the "benchmark" analyses that the ONA tariffs demand so clearly. Many facets of SCIS can be disclosed to parties who have been willing to sign the confidentiality agreement. Many of the illustrative "redacted" versions of the proposed Arthur Andersen output tables (generally page 2 of 2 of the Attachments) contain data that do not in any way compromise either the vendors' interests in the their price data or Bellcore legitimate interests in its intellectual property. This information simply cannot be "reverse engineered" so as to cause disclosure of such information. Many variables will have been blended together by the time Arthur Andersen will produce the types of output tables illustrated. Without detailed access to the types of limited data that *are* the subject of the confidentiality concerns, these data cannot be reverse engineered.[5] Arthur

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5. I have utilized SCIS input and output data in several contexts, including comparing getting started cost estimates and assumptions, without ever looking at the underlying switch

(continued...)

Andersen's March 30, 1992 letter transmitting the work plan to Bellcore, attached to the May 13 meeting material, does not appear to properly distinguish the types of data subject to redaction from the types of averaged, higher level cost *results* that should be disclosed under current practices.[6]

In some fifteen years of exposure to various versions and reiterations of the Switching Cost Information System I have found SCIS data to be quite helpful in analyzing LEC pricing practices. It may still prove useful in the FCC's context, but only if the Arthur Andersen audit and the resulting work products are carefully designed to address all issues that may be affected by SCIS and to produce meaningful *public* analysis.

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5. (...continued)
vendors' data and I have never had the need to examine the internal workings of the software itself.

6. By way of comparison, the Bureau's *NARUC ARMIS* letter (Richard Firestone to Paul Rodgers, November 7, 1989, FOIA Control No. 89-191) seems to make it clear that data will not be withheld from interested parties merely because it would embarrass the carrier or lead to results, such as changes in filed tariffs, deemed undesirable by the carrier. The same logic seems to apply here, except that the ARMIS matters partly involve data concerning non-regulated services that are presumptively competitive whereas BSEs are certainly monopoly services.